

## Attachment 1

# Gardner Emergency 2009 Technical Specifications

## **Attachment 1 – Gardner Emergency 2009 Technical Specifications**

### **1.0 GENERAL DESCRIPTION OF WORK**

**1.1** The work shall consist of utilizing a horizontal/directional drill (HDD) drill rig for the drilling of four (4) horizontal, vertical or angled, cased or uncased holes for the purpose of injecting grout for the purpose of filling voids in the subsurface soils created from the collapse of underground coal mine workings. The purpose of the backfilling is to reduce the risk of ground settlement or development of surface openings within the areas designated on the plans. Voids may not be encountered in all bore holes.

### **2.0 GENERAL WORK SCOPE**

**2.1** The work included in this specification shall consist of providing all labor, equipment, materials, water, power, and performing all operations to complete the intended ground remediation for the project, clean up of the area upon completion of the work, and all such other operations that are incidental to the work specified herein. Key aspects of the work to be performed or furnished by the Contractor include, but are not limited to the following:

1. Provide appropriate drilling equipment and experienced drill operators capable of drilling bore holes for the injection of grout. The Contractor shall be responsible for coordinating with relevant utility companies to avoid drilling into underground utilities, including but not limited to, electric, sewer, gas, water, and telecommunication lines.
2. Provide an appropriate system and materials to deliver, mix, and place low mobility grout. The volume of grout backfill placed per void encountered shall be verified and quantified by operator.
3. Use proper abandonment techniques for exploration and grout injection holes.
4. Equipment demobilization and site clean-up.

### **3.0 WORK SPECIFICATIONS**

#### **3.1 Drilling and Grouting**

The contractor will advance four bore holes at four separate locations at the work site. One hole will be approximately forty (40) feet in length, two will be approximately sixty (60) feet in length and one will be approximately eighty (80) feet in length. The boreholes will be advanced to a maximum depth of twenty-five (25) feet. The boreholes will be advanced to follow mine workings that underlie a residence. The mine workings are typically 25 feet below ground surface at the work site and are known to be 4 to 6 feet thick of void space. The contractor will advance the bore holes and attempt to intercept the mine workings. The contractor will carefully monitor for fluid loss, drill stem penetration rate and back pressure. Monitoring of these conditions will be conducted to determine when the bore holes encounter mine voids. The bore holes will be logged by the contractor during advancement identify subsurface materials and voids. The contractor is to observe boring and provide DEQ a log of all pertinent information. Parameters to be recorded shall include penetration rate, high torque zones, strata changes, drill actions, flush characteristics, hole stability. The information from these logs will be used to confirm voids and grouting zones. Each exploratory hole will also be used as a treatment hole for grout injection or backfilled as indicated by the Project Coordinator.

It is anticipated that the contractor will advance each bore hole to day light at a point on the opposite side of the residence from where the drilling commenced. The contractor will then pull 4" HDPE Schedule 80 conduit from the daylight side of the bore hole to the drill rig side of the bore hole. The conduit will then be pulled through the bore hole so that one open end will be at the location or locations of the void or voids encountered, if any. Grout will be injected into the void space. A grout injection stage shall be considered refused when one of the following occurs: grout flow ceases at a header reading pressure of twenty-five (25) psi or interconnection or surface breakout is observed. Bore holes not encountering voids will be backfilled/abandoned with grout.

The Contractor should review lithologic drilling logs of injection holes (and adjacent holes) previous to grout injection and determine maximum injection pressures and grout volume to be used. The Contractor shall be liable for any damages (surface or sub-surface) that may arise from, or during grout injection processes.

The Contractor shall ensure that the grout can be delivered to the grout pump within 90 minutes of batching. The Contractor shall submit a plan defining the method of grout supply. Portable batching equipment is acceptable providing the Contractor can demonstrate flexibility in alternating mix designs and slump on an as needed basis and the operation of this equipment will not adversely impact traffic flow or public safety. Any portable plant shall comply with OSHA requirements for emission control.

The mixing and pumping equipment shall provide for measurement of the following:

1. Grout pressure at the wellhead.
2. Flow rates of all on-site proportioned fluids.
3. Pumping rate of grout.
4. Cumulative volume of grout pumped.

Grout pumping equipment shall be specifically designed for pressure injection of grout and have the capability to inject grout under controlled pressures and flow rates. The grout shall consist of blend of fine aggregate, fines and water to achieve a pumpable, thixotropic, viscous grout of a low slump to enable pumping at high pressure and remain intact after injection.

**The grout shall consist of:**

1. Portland Cement: 100 pounds per cubic yard.
2. Aggregate: as required to achieve a yield of 27 cubic feet per cubic yard.
3. Superplasticizer: (High Range Water Reducer) 70 ounces per cubic yard.
4. Water: as required to achieve the specified slump range. Slumps will be measured five minutes after superplasticizer has been mixed into the grout. Water used in the grout mix shall conform to AASHTO T 26 and shall be potable, clean, and free from substances that may be injurious to cement and steel. Ground or local surface water may be used provided the contractor provides documentation the water is not detrimental to grout.

The grout is required to achieve a minimum 150 pounds per square inch (psi) unconfined compressive strength at 28 days in conformance with the latest ASTM standards for 100% humidity curing.

Cement shall be either Type I or Type II in accordance with the latest ASTM standard. Cement to be used on this project shall be the same type and brand throughout the life of the project. Any material changes will require approval by the Project Manager

**Aggregate shall meet the following gradation requirements:**

**Passing**

- 3/8" mesh sieve 100%
- No. 4 mesh sieve 90%
- No. 30 mesh sieve 40-80%
- No. 200 mesh sieve 5-25%

**Test Methods -** The following test methods may be used to evaluate the quality of aggregates:

- Particle Size Analysis AASHTO T 88
- Plasticity Index AASHTO T 89, 90
- Soundness (Sodium Sulfate) AASHTO T 104
- Organic Impurities AASHTO T 113
- Coal and Light Particles AASHTO T 113
- Clay Lumps AASHTO T 112



All information regarding the grouting operations shall be recorded by the Contractor and submitted to the Project Coordinator. This record shall include, but not necessarily be limited to, the following:

1. Drill hole/injection hole location, number and depth.
2. Grout quantities injected at various depths of each hole.
3. Grouting pressures and variations.
4. Grout mixes and variations thereof.
5. Total grout quantities placed per day.
6. Cumulative totals placed to date.
7. Methods of application.

The Contractor will provide these records on a daily basis to the Project Coordinator.

The Contractor shall maintain the grout mix temperature between 50 and 90 degrees Fahrenheit at all times.

#### **Minimum performance criteria for grout**

Compressive Strength 150 psi

Slump variation 1-11 inches

#### **Compressive strength must be achieved within twenty eight (28) days.**

Slump must be adjustable on-site over the range stipulated in one (1) inch increments by the introduction of thickening or thinning agents. Water may be used as a thinning agent. Variations of + or - (1) inch from the ordered slumps are acceptable. Material slumps under or over stipulated allowances must be field-corrected or will be rejected.

#### **3.2 Site Drainage Control**

The contractor shall control and properly dispose of drill flush and construction related waste, groundwater, excess grout and equipment washout water. This includes keeping waste fluids from entering the residential property.

#### **3.3 Dust Suppression**

The work will be undertaken at a residential location. The Contractor must utilize best management practices (BMPs) to minimize fugitive dust emissions.

#### **3.4 Site Restoration**

The Contractor will restore the site to its original conditions after the drilling and grouting activities have been completed. This includes, but is not limited to, filling ruts, recontouring disturbed areas, seeding, cleaning up areas of drilling fluids, etc.

#### **3.5 Ground Heave**

During construction, the Contractor shall utilize a system for monitoring ground heave/settlement in the vicinity of the drilling and backfilling locations. The Contractor will be required to use a laser level and provide skilled personnel to monitor ground movement continuously during pumping operations near all roads and structures. The laser level(s), and a minimum of two (2) sensors, shall be capable of detecting ground movement of ¼ inch at 100 feet. The Contractor will be liable for repair or restoration of anything damaged by grouting activities. This may include repairs or replacement of roads, foundations, structures, driveways, yards or anything else damaged by grouting activities. Any damages resulting from grouting activities must be promptly reported to the Project Coordinator and the property owner.

#### **3.6 Contractor's Quality Control**

The Contractor shall perform slump tests at least once per day of injection or at anytime as requested by the Project Coordinator. The Contractor shall cast 6-inch by 12-inch cylinders at the rate of one set of three cylinders for every 100 cubic yards of grout injected, but not less than once during each shift grout is placed. One of the cylinders is to be tested for compressive strength (ASTM 0 4832) at 7 days and one is to be tested at 28 days. All test data shall be promptly forwarded to the Project Coordinator. The test dates of one hold cylinder will be determined by the Project Coordinator. Testing of the 28-day and hold cylinders



will not be required if the required minimum strength is obtained at 7 days. Temperature readings of the grout are to be taken each time compressive strength cylinders are cast.

In addition, the Contractor shall submit records to the Project Coordinator to be detailed as follows:

1. Accurate daily reports providing technical details and quantities associated with drilling, grout installation, and results of material tests.
2. The Contractor shall provide a log for each boring used for installing grout. Such logs shall be neat, legible, and include an accurate characterization of all material encountered in the hole and notation of special features, if encountered, such as voids, soft or broken rock, ground water, loss of circulation of drilling fluids, rod drop, or any other item of interest. The Contractor shall prepare and submit to the Project Coordinator full installation logs for each drilling or grouting operation at each work location. The records shall be submitted within one work shift after the work drilling or grouting operation has been completed. A separate log shall be provided for each operation. The format of these logs will be established in the preconstruction submittals and meeting. All automated data generated during drilling and grouting operations shall be made available in real time to the Project Coordinator, with hard copies included in the daily logs.

### **3.7 Responsibility for Utilities**

The Contractor shall be responsible at his/her own cost for any and all work, expense of special precautions caused or required by the existence or proximity of utilities encountered in performing the work, including, without limitation thereon, repair of any and all damage and all hand or exploratory excavation required. The Contractor shall take reasonable steps to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service. The Contractor shall be responsible for coordinating with relevant utility companies to avoid drilling into underground utilities, including but not limited to, electric, sewer, gas, water, and telecommunication lines. As required by law,

## **4.0 EQUIPMENT**

### **4.1 Horizontal/Direction Drill Rig**

The contractor shall furnish drilling equipment suitable for the work capable of drilling vertical, horizontal or inclined holes, and capable of penetrating all subsurface materials. The drilling equipment and methods shall not damage adjacent ground or overlying structures. The horizontal directional drilling equipment shall consist of a directional drilling rig of sufficient capacity to perform the bore, a guidance system to accurately guide boring operations, and trained and competent personnel to operate the system. The drilling equipment and methods shall be suitable for drilling through all the conditions to be encountered, and shall be selected, and modified if necessary, by the contractor. The drilling method shall not cause damage to the adjacent ground and/or overlying structures. Drilling means and methods shall be selected by the contractor to match the anticipated ground conditions. Horizontal directional drilling shall include the use of mechanical and hydraulic deviation equipment to allow for changing the direction of the boring course at any point during the operation. The equipment shall include instruments capable of monitoring the exact location of the drilling head assembly. The equipment shall be capable of creating and directing the borehole along a predetermined path to the specified target location. Horizontal directional drilling shall be done with fluid-assisted mechanical cutting. Drilling fluids shall be as recommended by the equipment manufacturer. Contractor shall be responsible for regulating pressure and flow rates so that compaction of the surround sub-grade materials around the bore is not altered. Uncontrolled jetting (using fluid force to erode the soil) is prohibited. Mobile horizontal directional drilling system shall be capable of being started at the existing finish grade at an inclined angle to achieve required depth. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project. The directional drilling machine shall consist of a hydraulically powered system to drill into the ground at a variable angle. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the boring. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. The hydraulic system shall be free of leaks. The drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets. The Guidance System shall be of a proven type and shall be set up and operated by personnel trained and experienced with this system. The Operator shall be aware of any magnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

## Attachment 2

### Gardner Emergency 2009 Bid Form



**Attachment 2 - BID FORM**OWNER: Montana Department of Environmental QualityPROJECT: Gardner Emergency 2009CONTRACT NUMBER: 410008CATEGORY OF IMPROVEMENTS: Horizontal/Directional Drilling and Grouting

ASSURANCES BY BIDDER: The undersigned Bidder has familiarized itself with the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal, state and local laws, ordinances, rules, and regulations that in any manner may affect cost, progress, or performance of the work.

Bidder has attached a copy of its current Montana Certificate of Contractor Registration to the Bid Form. Failure to submit a Certificate will result in a determination that the Bidder is not a responsible bidder and is a basis for Owner to reject the Bid.

**Bidder proposes to furnish all materials and complete all Work prior to October 31, 2009**, complete in its entirety in the manner and under the conditions required in the Contract Documents, at the price listed herein as Total Contract Price. This price shall cover all expenses to be incurred in performing Work required under the Contract Documents, of which this Bid Form is a part. Amounts are shown in both words and figures, where indicated. In case of discrepancy, the amount shown in words will govern.

The Total Contract Price includes all labor, materials, mobilization and demobilization, overhead, profit, insurance, and incidentals required to complete Work.

Unit Cost Bid Prices for Conducting Horizontal/Directional Drilling and Grouting at the Gardner residence at 13386 County Road 354T off of County Road 134 located southwest of Fairview in Richland County, Montana				
Item	Unit	Number of Units	Cost per Unit	Total Cost
1. Mobilization/Demobilization	LS	1	\$ _____	\$ _____
2. Set Up at Drill Location	PE	4	\$ _____	\$ _____
3. Drilling of Bore Holes	LF	300	\$ _____	\$ _____
4. Pulling 4" Schedule 80 HDPE Conduit	LF	300	\$ _____	\$ _____
5. Inject Grout	CY	185	\$ _____	\$ _____
6. Regrade/revegetate all disturbed areas	LS	1	\$ _____	\$ _____
TOTAL CONTRACT PRICE IN WORDS:			TOTAL CONTRACT PRICE:	\$ _____

PE = Per Event  
LS = Lump Sum  
LF = Linear Feet  
CY = Cubic Yards

**BIDDER**

Name: \_\_\_\_\_

By: \_\_\_\_\_

Name /Title: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Tax ID. No.: \_\_\_\_\_

Contractor Registration Number / Effective Date \_\_\_\_\_

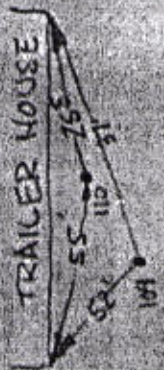
**[Attach copy of current Certificate of Contractor Registration(s) to Bid Form]**

## Attachment 3

### Gardner Emergency 2009 Soil Logs



LOG OF BOREHOLE NO. 110, 111, 112, & 113



Project: GARDNER 84-10-04  
 Driller: Hinningson  
 Method: Air Rotary  
 Drilling: (Start) 8-1-95  
 Date: 8-1-95  
 Logged By: L. Peterson

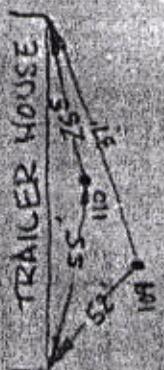
Borehole Location  
 (Location Map or Notes)  
 Elev.: \_\_\_\_\_

DEPTH	THICKNESS		PENETRATION TIME (MIN.)	PENETRATION RATE (F/M)	CIRCULATION		ROCK DESCRIPTION				REMARKS
	FROM	TO			GAIN	LOSS	TYPE	COLOR	GRAIN SIZE	OTHER	
3H	110										Sand
0'	8'										Sandy Clay
8'	9'										brown Clay
9'	14'										Sand
14'	19'										? Void
19'	20'										loose cuttings
20'	30'										
3H	111										
0'	11'										sandy gravel
11'	20'										brown clay

30' PM escape cuttings coming up.



LOG OF BOREHOLE NO. 110, 111, 112, & 113



Project: GARDNER 84-10-04  
 Driller: Hinnergov  
 Method: Air Rotary  
 Drilling: (Start) 8-1-85 (Finish)  
 Date: 8-1-85  
 Logged By: L. Peterson

Borehole Location  
 (Location Map or Notes)  
 Elev.: \_\_\_\_\_

DEPTH	THICKNESS		PENETRATION TIME (MIN)	PENETRATION RATE (F/M)	CIRCULATION		ROCK DESCRIPTION				REMARKS
	FROM	TO			GAIN	LOSS	TYPE	COLOR	GRAIN SIZE	OTHER	
3H	110										Sand
0'	8'										Sandy Clay
8'	9'										brown clay
9'	14'										Sand
14'	19'										? Sand
19'	20'										fine sand
20'	30'										loose cuttings +
3H	111										
0'	11"										sandy gravel
11'	20'										brown clay

cuttings coming up.

30' PMH BECAUSE



Borehole Location  
(Location Map or Notes)

Elev.:

BH # 117

[illegible]



## Attachment 4

### Gardner Emergency 2009 Bond Documents

4(a) Payment Bond

4(b) Performance Bond

# Attachment 4(a)

## Payment Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place  
of Business)

OWNER (Name and Address):

### CONTRACT

Date:

Amount:

Description (Name and Location):

### BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent or representative.

### CONTRACTOR AS PRINCIPAL

Company: \_\_\_\_\_ (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

### SURETY

Company: \_\_\_\_\_ (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

### CONTRACTOR AS PRINCIPAL

Company: \_\_\_\_\_ (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

### SURETY

Company: \_\_\_\_\_ (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

EJCDC No. 1910-28-B (1996 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractor Association, and the Associated Specialty Contractors.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the OWNER to pay for labor, materials and equipment furnished for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to the OWNER, this obligation shall be null and void if the CONTRACTOR:

- 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
- 2.2. Defends, indemnifies and holds harmless the OWNER from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Contract, provided the OWNER has promptly notified the CONTRACTOR and the Surety (at the addresses described in paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the CONTRACTOR and the Surety, and provided there is no OWNER Default.

3. With respect to Claimants, this obligation shall be null and void if the CONTRACTOR promptly makes payment, directly or indirectly, for all sums due.

4. The surety shall have no obligation to Claimants under this Bond until:

- 4.1. Claimants who are employed by or have a direct contract with the CONTRACTOR have given notice to the Surety (at the addresses described in paragraph 12) and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- 4.2. Claimants who do not have a direct contract with the CONTRACTOR:
  1. Have furnished written notice to the CONTRACTOR and sent a copy, or notice thereof, to the OWNER, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
  2. Have either received a rejection in whole or in part from the CONTRACTOR, or not received within 30 days of furnishing the above notice any communication from the CONTRACTOR by which the CONTRACTOR had indicated the claim will be paid directly or indirectly; and
  3. Not having been paid within the above 30 days, have sent a written notice to the Surety and sent a copy, or notice thereof, to the OWNER, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the CONTRACTOR.

5. If a notice required by paragraph 4 is given by the OWNER to the CONTRACTOR or the Surety, that is sufficient compliance.

6. When the Claimant has satisfied the conditions of paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:

- 6.1. Send an answer to the Claimant, with a copy to the OWNER, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed
- 6.2. Pay or arrange for payment of any undisputed amounts.

7. The surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.

8. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the Surety under this Bond, subject to the OWNER's priority to use the funds for the completion of the Work.

9. The surety shall not be liable to the OWNER, Claimants or others for obligations of the CONTRACTOR that are unrelated to the Contract. The OWNER shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. The Surety hereby waives notice of any change, including changes of times, to the Contract or to related Subcontracts, purchase orders and other obligations.

11. No suit or action shall be commenced by a Claimant under this bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, the OWNER or the CONTRACTOR, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, the CONTRACTOR shall promptly furnish a copy of this Bond or shall permit a copy to be made.

## 15. DEFINITIONS

15.1. Claimant: An individual or entity having a direct contract with the CONTRACTOR or with a Subcontractor of the CONTRACTOR to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of the CONTRACTOR and the CONTRACTOR's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.

15.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract documents and changes thereto.

15.3. OWNER Default: Failure of the OWNER, which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY--Name, Address and Telephone)

AGENCY or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):



# Attachment 4(b)

## Performance Bond

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

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CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place  
of Business)

OWNER (Name and Address):

### CONTRACT

Date:

Amount:

Description (Name and Location):

### BOND

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bond hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent or representative.

### CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

### SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

### CONTRACTOR AS PRINCIPAL

Company: (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

### SURETY

Company: (Corp. Seal)

Signature: \_\_\_\_\_

Name and Title:

EJCDC No. 1910-28-A (1996 Edition) Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

1. The CONTRACTOR and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Contract, which is incorporated herein by reference.

2. If the CONTRACTOR performs the Contract, the Surety and the CONTRACTOR have no obligation under this Bond, except to participate in conferences as provided in paragraph 3.1.

3. If there is no OWNER Default, the Surety's obligations under this Bond shall arise after:

3.1. The OWNER has notified the CONTRACTOR and the Surety at the addresses described in paragraph 10 below, that the OWNER is considering declaring a CONTRACTOR Default and has requested and attempted to arrange a conference with the CONTRACTOR and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract. If the OWNER, the CONTRACTOR and the Surety agree, the CONTRACTOR shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive the OWNER'S right, if any, subsequently to declare a CONTRACTOR Default, and

3.2. The OWNER has declared a CONTRACTOR Default and formally terminated the CONTRACTOR'S right to complete the Contract. Such CONTRACTOR Default shall not be declared earlier than twenty days after the CONTRACTOR and the Surety have received notice as provided in paragraph 3.1; and

3.3. The OWNER has agreed to pay the Balance of the Contract Price to

3.3.1. The Surety in accordance with the terms of the Contract, or

3.3.2. Another contractor selected pursuant to paragraph 4.3 to perform the Contract.

4. When the OWNER has satisfied the conditions of paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

4.1. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract, or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER'S concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract, and pay to the OWNER the amount of damages as described in paragraph 6 in excess of the Balance of the Contract Price incurred by the OWNER resulting from the CONTRACTOR Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances;

4.4.1. After investigation, determine the amount for which it may be liable to the OWNER and, as soon as practicable after the amount is determined, tender payment therefore to the OWNER; or

4.4.2. Deny liability in whole or in part and notify the OWNER citing reasons therefor

5. If the Surety does not proceed as provided in paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the OWNER to the Surety demanding that the Surety perform its obligations under this Bond, and the OWNER shall be entitled to enforce any remedy available to the OWNER. If the Surety proceeds as provided in paragraph 4.4, and the OWNER refuses the payment tendered or the Surety has denied liability, in whole or in part, without

further notice the OWNER shall be entitled to enforce any remedy available to the OWNER.

6. After the OWNER has terminated the CONTRACTOR'S right to complete the Contract, and if the Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the OWNER shall not be greater than those of the CONTRACTOR under the Contract, and the responsibilities of the OWNER to the Surety shall not be greater than those of the OWNER under the Contract. To a limit of the amount of this Bond, but subject to commitment by the OWNER of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of the CONTRACTOR for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from the CONTRACTOR'S Default, and resulting from the actions or failure to act of the Surety under paragraph 4, and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of the CONTRACTOR.

7. The Surety shall not be liable to the OWNER or others for obligations of the CONTRACTOR that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the OWNER or its heirs, executors, administrators, or successors.

8. The Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders and other obligations.

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within two years after CONTRACTOR Default or within two years after the CONTRACTOR ceased working or within two years after the Surety refuse or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

10. Notice to the Surety, the OWNER or the CONTRACTOR shall be mailed or delivered to the address shown on the signature page.

11. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

12.1. Balance of the Contract Price: The total amount payable by the OWNER to the CONTRACTOR under the Contract after all proper adjustments have been made, including allowance to the CONTRACTOR of any amounts received or to be received by the OWNER in settlement of insurance or other Claims for damages to which the CONTRACTOR is entitled, reduced by all valid and proper payments made to or on behalf of the CONTRACTOR under the Contract.

12.2. Contract: The agreement between the OWNER and the CONTRACTOR identified on the signature page, including all Contract Documents and changes thereto.

12.3. CONTRACTOR Default: Failure of the CONTRACTOR, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. OWNER Default: Failure of the OWNER which has neither been remedied nor waived, to pay the CONTRACTOR as required by the Contract or to perform and complete or comply with the other terms thereof.

(FOR INFORMATION ONLY--Name, Address and Telephone)

AGENT or BROKER: OWNER'S REPRESENTATIVE (Engineer or other party):